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OPNAVINST 5100.23F

On 15 July 2002, the Chief of Naval Operations (CNO) released the latest edition of the Navy's Occupational Safety and Health Program Manual, OPNAVINST 5100.23F. You can download a copy of the document from the following websites:

- NAVOSH CNO-N454 http://www.navosh.net/cno/ashore.cfm
- BUMED Occupational Health and Safety https://bumed.med.navy.mil/med24/med-2422
- Navy's Electronic Directives System (NEDS) http://neds.nebt.daps.mil/Directives/table21.html.

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NEWS AND NOTES

1. The Hazard Abatement Program Manager at PWC Norfolk has provided a guide for safety and health professionals. Entitled ***"Guidance for Submitting a Hazard Abatement Project"*** the publication is posted at http://www.navosh.net/navcom/library/otherdocs.cfm. This guide provides all the information needed for a Navy activity to request funding from a CNO centrally managed account for abatement of hazards beyond the activity's capability. For more information contact the appropriate Hazard Abatement Program Manager listed in Attachment 5 of the guide.

2. The NAVOSH Environmental Training Center's FY03 Course Catalog is now available on-line at http://www.norva.navy.mil/NAVOSH/tableofcontentsfy03.cfm. NAVOSHENVTRACEN provides initial and refresher training in all of the asbestos accredited disciplines, as well as many other areas. See the catalog for dates and locations of the courses.

3. OSHA Quick Takes (Volume 1, Issue 13) of September 2002 is available at http://www.osha.gov/as/opa/quicktakes/. Quick Takes is a bi-weekly e-news memo with information, updates and results from OSHA about safety and health in America's workplaces. You can receive the Quick Takes document via e-mail through OSHA's subscription request form.

4. On 14 June 2002, the Senate introduced a bill (S. 2641) to ban asbestos, revisiting EPA's attempt in 1989 which was subsequently overturned by a Court of Appeals in 1991. While new uses of asbestos were banned in 1989, existing ones were not. This legislation would ban all future uses of asbestos. As introduced, the Administrator of the EPA will be required to issue regulations to "prohibit covered persons from manufacturing, processing, or distributing in commerce asbestos-containing products" by January 2005. The full text of the bill is available from the Library of Congress Thomas website at http://thomas.loc.gov/ by entering the bill number "S.2641" into the search box.

5. On 27 June 2002, the Toxic Mold Safety and Protection Act of 2002 (HR 5040) was introduced to Congress. The legislation would create a national toxic mold hazard insurance program and indoor mold hazard assistance. The bill mandates that EPA issue standards for certification of mold inspectors, mold remediators, mold testing labs, mold risk assessors, and industrial hygienists involved with mold remediation planning. The full text of the bill is available from the Library of Congress Thomas website at http://thomas.loc.gov/ by entering the bill number "HR5040" into the search box.

6. The U.S. Army Center for Health Promotion and Preventive Medicine has developed two technical guides (TG) to aid in assessing and remediating mold. TG-277***, "Army Facilities Management Information Document Mold Remediation Issues,"*** and TG-278, ***"Industrial Hygiene/Preventive Medicine Mold Assessment Guide."***

   TG-277 was designed to provide information to facilities management personnel who have little or no experience with mold remediation. The document was designed to assist in making a reasonable judgment as to whether the situation can be handled in-house. It will help those in charge of maintenance to develop or evaluate remediation plans.

   TG-278, when used in conjunction with TG 277, will assist industrial hygienists and preventive medicine personnel conduct mold investigations.

   Both documents can be downloaded from USACHPPM website at http://chppm-www.apgea.army.mil/armydocs.asp?pub_type=TG

7. The Department of Health and Human Services (HHS) has released new guidelines for protecting ventilation systems in buildings from chemical, biological, and radiological attacks. The document, ***"Guidance for Protecting Building Environments from Airborne Chemical, Biological, or Radiological Attacks,"*** can be accessed via EPA's Indoor Environment page at http://www.epa.gov/iaq/ohs.html.

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VENTILATION FOR WOODWORKING FACILITIES

Exposure to wood dust has long been associated with a variety of adverse health effects, including dermatitis, respiratory effects, and cancer. Contact with the irritant compounds in wood sap can cause dermatitis and other allergic reactions. The respiratory effects of wood dust exposure include asthma, hypersensitivity pneumonitis, and chronic bronchitis. Excessive amounts of dust, if allowed to accumulate inside equipment and in shop areas, create fire or explosion hazards.

The primary method of controlling wood dust is with local exhaust ventilation (LEV), which removes dust at or near its source. LEV systems can often be integrated with machine guards. In addition to general industrial ventilation principles, there are a few special considerations in designing LEV systems for woodworking facilities.

Woodworking equipment produces a large amount of fine and coarse dust by abrasive or cutting actions. Coarse dust is usually collected around the point of generation, while fine dust is carried away in air currents. Wood dust is emitted at high velocity by moving or spinning machine components. The movement of machine parts such as cutters, blades, and belts, create considerable air movement, which makes capturing more difficult. Consider the following points in designing ventilation system for woodworking shop:

1. Enclose all moving parts of machinery as much as possible to minimize stray air currents. Enclosure must have cleanout doors for removing built-up dust.
2. Locate the hood as close as possible to the point of dust generation. Use flanges and baffles to improve hood efficiency.
3. Design the hood to take advantage of, rather than work against, the natural air movement created by the machine. Locate the hood to induce the exhaust airflow in the same direction with the with the air movement created by the machine.
4. Design to have all machines working at the same time. A common practice found in many wood shops is to close the blast gates of all unused machines to increase the flow in hoods that are in use. For taper systems, this practice may plug the main duct. Although we may find a better capture at the hoods that are in use, closing many other hoods will not provide enough air to maintain a minimum transport velocity in the main duct, causing dust to settle and build up.
5. Balance the system to ensure that each branch exhausts the right flow rate required for the machine it serves. Mark and lock the blast gates to prevent tampering of the system.

For LEV systems to provide maximum protection, they should be properly maintained. Check and clean ducts and dust collectors at regular intervals. Inspect ducts to ensure that they are not loose, broken, or damaged. Check the V-belts on the drive units of belt-driven exhaust fans for slippage or breakage. Make sure the duct velocity is maintained at a minimum of 3,500 to 4,000 feet per minute to effectively remove light dry saw dust, heavy wood chips, and green shavings, and to prevent these from plugging the system.

The American Conference of Governmental Industrial Hygienists (ACGIH) developed design data for a number of woodworking operations in the publication *"Industrial Ventilation, A*

Manual of Recommended Practice," 24th Edition. To purchase the manual, contact the ACGIH at (513) 742-2020 or visit the web page http://www.acgih.org.

The National Institute for Occupational Safety and Health (NIOSH) published a series of seven Hazard Controls fact sheets concerning wood dust control techniques. NIOSH is the Federal agency responsible for conducting research and making recommendations for preventing work-related illness and injuries. Hazard controls are based on research studies that show reduced worker exposure to hazardous agents or activities. Copies of the Hazard Controls fact sheets and additional information about hazard control can be obtained by calling NIOSH at 1-800-356-4674 or visiting NIOSH's website at http://www.cdc.gov/niosh/publistd.html.

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IAM CONNECTION

IAM, I've been reviewing a lot of designs for new construction and the following questions have come up. I wanted to find out Navy policies while also finding out the details on how things are really supposed to be managed. An IAM Reader.

IAM Reader, refer to our asbestos web page at http://enviro.nfesc.navy.mil/esc425/AsbPage.htm for Navy policies, related regulations, and guidance for asbestos management. The followings are answers for your specific questions:

Q. Is there a policy/instruction/guideline that requires asbestos inventories of all buildings owned by a Navy activity? When would inventories have to be completed?

A. In 1985, CNO issued a letter requiring all commands to conduct asbestos inventories on all of their buildings by 1990. However, due to a lack of funding and non-enforcement the majority of activities did not meet this deadline. CNO revised the requirement in OPNAVINST 5100.23 by allowing activities to develop their inventory building by building, as needed (see Appendix 17-C Survey and Material Assessment).

Q. Would an inventory consist of a full inspection with corresponding asbestos bulk samples?

A. Per definition, an asbestos inventory consists of locating, identifying, and assessing the condition of asbestos containing materials. If a material is presumed to contain asbestos, bulk sampling is not required as long as the material is always treated as asbestos. Only an EPA/AHERA certified asbestos inspector is allowed to conduct an asbestos inspection.

Often building inventories, which do not correspond to a renovation or demolition, are focused on friable, accessible, and damaged materials. These materials have the highest exposure potential to workers and building occupants. Bulk samples of these materials are taken to reduce inventory cost and ensure hazard elimination.

Q. How are inventories supposed to be documented and managed? For example, is it okay to have paper files of asbestos inventories and sample results in many different building folders in many different locations, or should there be a master document or database somewhere--perhaps even in electronic format?

A. There are many different ways to document and manage the information from the inventories, as well as other information. A Geographic Information System (GIS) system is a good way to pinpoint locations, however, they are costly to populate with information. Paper files work fine, if they are updated in a centralized location, usually with the Asbestos Program Manager (APM), and available for all those who need the information.

The Army and the Navy jointly developed a free program, which can be downloaded from http://owww.cecer.army.mil/painterl/HALO.html. It is called Hazardous Asbestos and Lead Optimal (HALO) Management Program, and can be used in conjunction with a GIS system. Again, the updated data should be kept in a centralized location (e.g., by the APM) with copies available to others who need to know.

Q. If a building is going to be renovated, demolished, partially deconstructed and then rebuilt, or otherwise disturbed, should there be a formal and THOROUGH asbestos inspection by a trained and certified inspector?

A. You need to identify all of the asbestos containing materials to be disturbed prior to beginning the job. NESHAP (40 CFR 61) requires "prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II non-friable ACM." OSHA 29 CFR 1926.1101 also requires buildings owners to "determine the presence, location, and quantity of ACM, and/or PACM at the work site" prior to beginning work. Both regulations require inspections to be conducted by an EPA/AHERA accredited Asbestos Building Inspector.

Q. How long are these records required to be on file?

A. OSHA 29 CFR 1910.1001 requires building owners to maintain records of all information "concerning the presence, location, quantity of ACM and PACM in the building. Such records shall be kept for the duration of ownership and shall be transferred to successive owners." For demolished buildings the records need only be kept as required by the regulations (i.e., retain waste shipment records for two years). For renovations, keep records on the removal and replacement of ACM for the life of the buildings. These records can then be relied on during subsequent operations to refute the presence of asbestos in that portion of the building.

Q. Do Navy activities have a responsibility to verify the existence or non-existence of asbestos in buildings that they own before work is done either by contractors or Government workers?

A. A NESHAP inventory is required prior to renovation or demolition. This inventory can be done by a licensed asbestos contractor, or by Government workers, accredited as asbestos inspectors.

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LESSON LEARNED: CONTRACTING LEAD WORK

During the May 2002 American Industrial Hygiene Conference and Exhibition, an OSHA inspector presented a paper on several lead overexposure incidents that occurred at Federal agencies. Two contracted firms and the Federal government were cited for lead overexposures under different OSHA regulations. The small contracted firms performed service contracts at or near firing ranges. One contract was for lawn maintenance and the other was for firing range hopper cleanup.

Lawn Maintenance. The OSHA inspector observed lead exposures above the PEL (8-hr TWA) during the contractor's quick operations. Prior to the OSHA inspection, the company had an IH consultant test for lead exposure. While the OSHA inspector and the IH consultant observed significant differences in lead exposure, both identified much higher exposures during hot weather and dry grass conditions versus wet or damp grass conditions. The OSHA inspector also noted lead on the mower tank. The contract ended before the contractor could implement controls. However, the subsequent contract went to a lead abatement contractor familiar with lead exposure issues.

Recommendations to reduce exposure are:

- Hire a lead abatement company familiar with lead practices.
- Mow only when the grass is damp, e.g., early morning.
- Use an automatic bagging system.
- Decontaminate equipment after use.
- Consider growth inhibitors to reduce mowing frequency.

Firing Range Hopper Cleanup. A vendor cleaning out a bullet collection hopper hired an independent contractor to evaluate their lead exposures. The exposures were over seven times the 8-hr TWA. Engineering controls were installed. However, no follow-up IH samples were taken. Samples taken by OSHA inspections showed that exposures were still over twice the 8-hr PEL. Wipe samples revealed significant lead on the enclosure lid and steering wheel. After intervention, the contractor's employee exposures were below the action level.

Recommendation for hopper clean-out operations are:

- Develop lead compliance program.
- Implement additional engineering controls.
- Use a full face PAPR or half face negative pressure respirator during clean-out operations.
- Develop a cleaning procedure for the hopper area.
- Conduct quarterly exposure monitoring.

General Findings. As DOD continues to contract out more work to private sector firms, we will have to be diligent in helping small contractors understand their responsibilities. These exposures should have been identified in the contract to prevent untrained vendors from bidding on the contract. Check with facilities and/or contracts office personnel to determine if your base is unintentionally exposing vendors to lead and other stressors. Contracting lessons learned from this case are:

- These were short duration exposures that exceeded the PEL
- Small contracted firms frequently lack expertise to identify hazards
- Whenever engineering controls are installed, follow-up with IH studies to confirm that they did the job.
- If you suspect a problem that does not have imminent danger with a contracted operation, identify the problem to the contracting officer. Recommend that the contracting officer require contractors to contact the local OSHA authority for a consultation to identify and abate the problem.

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The Indoor Air Monitor is published quarterly by the NAVOSH Air Branch, Environmental Department, Naval Facilities Engineering Service Center (http://www.nfesc.navy.mil/). Visit our NAVOSH web page at: http://enviro.nfesc.navy.mil/esc425/NoshArBr.htm. The views and opinions expressed in this publication are not necessarily those of the Department of the Navy. Send information, comments, or ideas via e-mail to: iam@nfesc.navy.mil. Please include your name, mailing address, e-mail address, DSN and commercial telephone number.

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